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AUTHOR Brenes, Carmen C.; Westerman, Michael A.
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ABSTRACT

The effect of maternal personality characteristics and interaction behavior on interventions with children was investigated among 210 Puerto Rican mother/child dyads of low socioeconomic status. Mothers' and children's personality characteristics were assessed according to numerous and varied paper-and-pencil tests. Measures of children's performance included four aspects of role playing and nine dimensions of ego functioning; measures of mothers included aspects of personality orientation and level of ego development. Additionally, (1) each child's mother and teacher were asked to evaluate the child on several measures, (2) mother/child interaction was assessed by direct observation in a treatment analog, (3) each mother was pretested and posttested, and (4) a subgroup of 40 mothers participated in a videotaped structured interaction task. Findings generally indicated that the mother's ego development level, self-regard, self-acceptance, acceptance of aggression, and trait anxiety were related to the child's relationships with others and to the development of more adaptive person relations. (RH)

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# Mothers' Contribution to an Early Intervention Program for Hispanic Children

Carmen C. Brenes
New York University
and
Hispanic Research Center
Fordham University

Michael A. Westerman
New York University

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Abstract

An intervention program using folktales was designed for Puerto Rican children. Two hundred and ten mother-child dyads participated in the program. The relationship between maternal and child personality characteristics prior to the intervention and the effect of maternal characteristics on implementation of the intervention was investigated. Mothers were pre- and post- interviewed and children were pre- and post tested. Also a subsample of these mothers (n = 40) were videotaped as they interacted with their child in a structured observation. The data from the direct observation has not yet been analyzed. Results from the assessment of personality characteristics showed that mother's ego development level, self-regard, self-acceptance, acceptance of aggression and trait anxiety is related to a child's relationships with others and the development of more adaptive person relations. These findings need to be carefully interpreted in view of low reliability of the child measures and possible restriction of range due to the sampling procedure. The analysis of the direct observations will provide an assessment of the mother-child interaction and perhaps a better measure of the relationship between maternal and child personality characteristics.

## Mothers' Contribution to an Early Intervention Program for Hispanic Children

The pivotal role of parents, especially mothers, as the prime environmental mediators in child development has been supported by major theorists and researchers for many years (Baumrind, 1966, 1972, 1973; Hess and Shipman, 1965; Jacobson, 1954). Later in the child's development, environmental forces supplement the parental influence. Nevertheless, the particular quality of the parent-child interaction is significant factor in the establishment of permanent motivational and personality attributes in the child.

Studies in the area of parental influence on child development have traditionally focused on the relationship between maternal interaction behavior and child development (Clarke-Stewart, 1973; Halverson and Waldrop, 1970; Jones, Rickel and Smith, 1980; Kagan and Moss, 1962), maternal personality characteristics and child development (Baumrind, 1972; Bronson, 1974), and maternal personality characteristics and maternal interaction behavior (Mondell and Tyler, 1981). Recently, a number of intervention techniques have been developed which employ parents as change agents. This has spurred interest in a fourth area of child development: the importance of maternal personality characteristics and interaction behavior on the effectiveness of an intervention with the child (Andrews et al., 1982; Garber and Heber, 1976; Levenstein, 1970; Madden, Levenstein, and Levenstein, 1976). The central concern of this study is this latter point.

While researchers have recognized that parental involvement in their programs could be a determining factor in the effectiveness of

their interventions, they have failed to look at individual differences in mothers as facilitators of the specific intervention. For example, a study of Parent-Child Development Centers (PCDC) report findings which demonstrate that although increased information and improved child-rearing attitudes were important, a mother's actual behavior with the child seemed to have a direct effect on the child's behavior and ultimate development (Andrews et al., 1982). However, researchers did not look at individual differences in the mother-child dyads. The primary goal of this study is to look at this last issue along with the other three.

This study is part of the larger study investigating the effectiveness of different treatment conditions in helping children develop adaptive behaviors, specifically defined as ego functions. The focus of this study is on the mothers' role, both in the development of these children and in the implementation of the intervention. This is important because of the lack of studies in this area with the Hispanic population, and also to determine whether the mother is essential for effective implementation of an intervention. That is, if individual differences in mother-child dyads are important then one would want to discern which maternal characteristics are associated with effective implementation of treatments.

In the present study, mothers and children's personality characteristics were assessed using various paper and pencil tests and mother-child interaction behavior was assessed by direct observation in a treatment analog. The study looks at whether mothers' personality characteristics and/or maternal interaction behavior are related to

children's personality characteristics prior to the intervention and/ or to the child's change in personality characteristics from pre- to post intervention. Also, the study examines whether there is a relationship between mothers' personality characteristics and maternal interaction behavior with their children.

## Method

### Subjects

There were 216 mother-child dyads in the sample, selected to participate in the study if they fell below the fiftieth percentile on a teacher's behavior rating scale. Because of the nature of the intervention, involving Puerto Rican folktales, only Puerto Rican children were involved in the study. All families had low socioeconomic status. For 140 of the 216 families, no father was present in the home, and 184 mothers reported they did not work. Mothers' and fathers' level of education tended to be low, ranging from 0 to 18 years (mean=8.6) and 0 to 16 years, (mean=8.5)respectively.

### Procedure

Each mother was pre-and post-inverviewed and each child was pre- and post-tested. In addition, a subgroup of mothers in the overall sample, was asked to participate in a structured interaction task. Forty mothers agreed to be videotaped as they interacted with their child. The assessment of maternal behavior in these tapes will provide information on maternal interaction behavior with her child.

### Measures

The measures on the children were part of the larger study. They

included four measures assessed by a Role Playing Scale (Costantino, 1980) delay of gratification (DG), self concept of competence (SCC), disruptive behavior (DIS) and aggressive behavior (Agg); and nine ego functions assessed by TEMAS (Costantino, 1978), person relations (PR), aggression (AG), anxiety (ANX), achievement motivation (AM), delay of gratification (DLG), self concept of competence (CC), self-sexual identity (SSI), moral judgement (MJ) and reality testing (RLT). The mothers variables included a measure of the mother's trait anxiety (SE) assessed by Spielberger's test of trait anxiety (Speilberger, 1970), self regard (SR), self-acceptance (SA) and acceptance of aggression (A) assessed by the three scales of the Personality Orientation Inventory (Shostrom, 1977) and ego development level as measured by Loevinger's Sentence Completion Test (Loevinger, 1976). In addition, mothers were asked to evaluate their children on the basis of the "How I Feel" Questionnaire, Spielberger's test of trait anxiety for children, and on a behavior rating scale (Costantino, 1980). An identical behavior rating scale was completed by the teachers on all of the children.

On the basis of direct observations, the following measures on the mother will not be assessed (Mondell and Tyler, 1981): treating the child as an origin, i.e. allowing children to use their own resources to take action, degree of warmth and delight, overall helpfulness of the parent, the amoung of psychical intrusions, statements of approval and disapproval and statements or gestures of acceptance.

Results

At the present time, the observational data has not been coded, and therefore, the results here are limited to the data on maternal

personality characteristics. Two judges independently scored a small subsample of Loevinger's Sentence Completion tests (n = 19) to establish interrater reliability. Pearson product moment correlations between scorings by the two judges was computed, indicating that interrater reliability on the total protocal rating was high, r =.99.

Test-retest reliability of the measures was investigated by computing the Pearson product moment correlation between pre- and post-scores in the control group. These reliabilities are reported in Table 1.

INSERT TABLE 1

In general reliabilities were low to moderate for the mother measures and low for the child measure.

The interrelationship between the mothers' scales, based on the full sample, was generally non-significant. The relationship between variables that were correlated significantly tended to be weak. This suggests that for the most part, each measure on the mother is independent.

INSERT TABLE 2

Regression analyses were performed for each of the child variables. In each analysis a child measure was regressed upon a set of mother variables. These analyses investigated the effect of maternal personality characteristics. One significant correlation emerged of the 16 regression analyses. When the dependent variable is person relations (PR), a significant multiple R was obtained ($R = .263$, $F(5, 195) = 2.89$, $p < .05$). This suggests that taken as a whole, the group of mother variables are associated with adaptive person relations in children.

Pearson product - moment correlations between mothers and children's pre scores are shown in Table 3. As can be seen, only 11 significant correlations emerged. This fact, along with the magnitude of the correlations, suggest that whatever relationship there is between mother and child variables, it tends to be weak. Note that person relations is significantly correlated only with one mother variable, acceptance of aggression.

To assess the effect of the mother personality characteristics on the child's personality characteristics change between pre- and post-testing, a hierarchical regression approach was used. In this analysis, the child's post score served as the dependent measure and the child's pre-score was entered into the equation first. The mother variables were then entered as a set. The increment of additional variance in child post-scores explained by the inclusion of the set of mother variables served to test the effect of the mother variables on the child's change. Once again, the significant relationship which emerged was between mother variables and person relations in the child as measured by TEMAS (multiple partial $R = .25$, $F(6, 194) = 2.52$, $p < .05$). This suggests that over and above whatever relationship exists between maternal personality characteristics and children's relationships with others, maternal characteristics have an effect on the child's development of more adaptive person relationships. This needs to be carefully interpreted since person relations as measured by TEMAS was not a reliable variable in the control group and there was no treatment effect nor interaction effect between treatment group and person relations in the study.

Discussion

The results offered only minimal support for the relationship between maternal characteristics and child pre-scores on personality measures. This correlation between child's person relations and maternal characteristics-ego level, self-acceptance, acceptance of aggression and trait anxiety might reflect maternal influence on the child relationships with others but in view of the reliability of the child measure, this cannot be stated with confidence. In terms of the mothers' impact on the treatment, results do not suggest much. Again, maternal personality characteristics may influence the development of adaptive person relations in children but the finding also needs to be interpreted carefully.

There are a number of reasons why the results may not be more conclusive. The poor test-retest reliability on the child measures, which has already been mentioned, raises the possibility that inadequate measures were used. A second reason may be the restricted range of scores given the sampling procedure. The lack of variability on the child measures may have attenuated the correlation between mother and child variables. The limitations in the measures and possibly the restricted range in the sample may account for the limited findings. Perhaps if better measures were used, the relationship between mother-child personality characteristics might have been stronger.

Most importantly, the primary thrust of this study involves the assessment of mother's approach to the child but this has not yet been analyzed. When analyzed we will be able to assess the relationship between mother and child characteristics and the mothers' contribution

to the treatment in a more adequate way. As was suspected in the PCDC study (Andrews et al., 1982), a mother's actual behavior may be the determining factor on a child's behavior and, therefore, the best measure of this relationship between variables may be a direct assessment of the mother-child interaction. If the findings of this assessment support the hypotheses, then it would suggest that in programs such as this one, it would be important to assess mothers' personality characteristics and provide remediation for those who would not be able to implement the treatment effectively.

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TABLE 1

Test-Retest Reliability of Mother and Child Variables

| Variables | r |
|---|---|
| Mother | |
| self-regard | .48** |
| self-acceptance | .41* |
| acceptance of aggression | .53** |
| ego development level | .76** |
| trait anxiety | .75** |
| Child | |
| delay of gratification (RP) | .32* |
| self-concept of competence (RP) | .28* |
| disruptive behavior | .38* |
| aggressive behavior | .42* |
| person relations | .24 |
| aggression | .16 |
| anxiety | .45** |
| achievement motivation | .11 |
| delay of gratification (TEMAS) | .17 |
| concept of competence (TEMAS) | -.07 |
| self sexual identity | .38* |
| moral judgement | .07 |
| reality testing | .21 |
| teacher's behavior rating scale | .46** |
| mother's behavior rating scale | .60** |
| trait anxiety | .54** |

Note: $n = 51$, $*p \leq .05$, $**p \leq .001$.

TABLE 2

Interrelationship Among Maternal Variables

| | Trait Anxiety | Self-Regard | Self-Acceptance | Acceptance of Aggression |
|---|---|---|---|---|
| Ego Development Level | .21* | .06 | .07 | .05 |
| Trait Anxiety | | .26* | .02 | -.08 |
| Self-Regard | | | .05 | .32* |
| Self-Acceptance | | | | .42* |

Note: $204 \leq n \leq 207$; *$p \leq .001$

TABLE 3

Relationship between Pre-treatment measures for Mother and Child

| | Ego Development Level | Maternal Trait Anxiety | Self Regard | Self Acceptance | Acceptance of Aggression |
|---|---|---|---|---|---|
| Delay Gratification (RP) | -.05 | .04 | .02 | .01 | .03 |
| Self Concept of Competence | .07 | -.08 | .04 | -.01 | .02 |
| Disruptive Behavior | .01 | .04 | -.11 | .03 | .00 |
| Aggressive Behavior | -.13 * | -.16 * | -.01 | .11 | .06 |
| Person Relations | -.09 | -.11 | -.04 | -.04 | .18 * |
| Aggression | .02 | .00 | -.05 | -.08 | .04 |
| Anxiety | -.0035 | .01 | -.01 | .01 | .01 |
| Achievement Motivation | -.06 | .05 | -.05 | .09 | .11 |
| Delay Gratification (TEMAS) | -.01 | -.04 | -.08 | -.04 | .06 |
| Concept of Competence | .09 | -.09 | -.07 | .01 | .05 |
| Self Sexual Identity | -.12 | -.07 | .04 | .14 * | .18 * |
| Moral Judgment | .01 | -.01 | -.01 | .08 | .15 * |
| Reality Testing | .02 | -.05 | .01 | -.03 | .08 |
| Behavioral Ratings by Mother | .18 * | .34 ** | .30 ** | -.06 | .01 |

TABLE 3 Continued

Relationship between Pre-treatment measures for Mother and Child

| | Ego Development Level | Maternal Trait Anxiety | Self Reward | Self Acceptance | Acceptance of Aggression |
|---|---|---|---|---|---|
| Behavioral Ratings by Teacher | .02 | .03 | -.02 | -.04 | -.08 |
| Trait Anxiety reported by Mother | -.09 | -.46 ** | -.16 * | .09 | .07 |

Note: *p $\leq$ .05

**p $\leq$ .001